

47. (new) An expression vector comprising a nucleic acid of claim 41.

48. (new) A host cell transfected with the vector of claim 47.

REMARKS

In response to the restriction requirement mailed April 30, 2002, applicants elect Group I, claims 1-11 and 22-23, directed to nucleic acids, vectors and host cells. New claims 41-48 correspond to the claims of Group I. Applicants further elect the species SEQ ID NO:5 recited in independent claim 41 for the purposes of searching.

Applicants note that claim 41 is a genus claim linking the dependent species claims 42-48. As such, upon allowance of a linking genus claim, the restriction requirement should be withdrawn with respect to the species claims. MPEP 809.03. Applicants further note that when the requirement for restriction is predicated upon the non-allowability of a generic linking claim, Applicant is entitled to retain in the case claims to the non-elected invention. If the generic linking claim is allowed, the Examiner must then examine non-elected claims to species falling within the genus. MPEP 809.04.

The foregoing election is made with traverse, as the nine groups set forth by the Examiner all stem from a common concept and theory, and are thus related. As such, prosecution of the claims of Groups I-IX would not place a substantially greater burden on the Examiner. Applicants therefore respectfully request that the Examiner withdraw the Restriction Requirement and consider all the claims together.

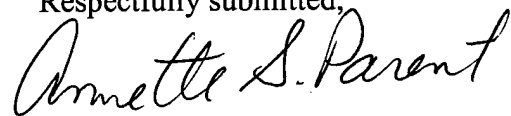
New claims 41-48 have been added. These claims are directed to nucleic acids encoding an KCNQ5 potassium channel monomer. These claims add no new matter. Support for these claims can be found, e.g., in claims 1-11 and 22-23 as originally filed. Support can also be found, e.g., in the specification on page 22, lines 30-33.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,

A handwritten signature in cursive script that reads "Annette S. Parent".

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**APPENDIX A**  
**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

41. (new) An isolated nucleic acid encoding a polypeptide comprising an alpha subunit of a KCNQ potassium channel, wherein said polypeptide forms, with at least one additional KCNQ alpha subunit, a KCNQ potassium channel having the characteristic of voltage-gating; and wherein said nucleic acid specifically hybridizes under stringent conditions to a nucleic acid encoding an amino acid sequence of SEQ ID NO:5, wherein the hybridization reaction is incubated at 42°C in a solution comprising 50% formamide, 5x SSC, and 1% SDS and washed at 65°C in a solution comprising 0.2x SSC and 0.1% SDS.

42. (new) The isolated nucleic acid of claim 41, wherein said nucleic acid selectively hybridizes under stringent conditions to a nucleic acid encoding an amino acid sequence of SEQ ID NO:4, wherein the hybridization reaction is incubated at 42°C in a solution comprising 50% formamide, 5x SSC, and 1% SDS and washed at 65°C in a solution comprising 0.2x SSC and 0.1% SDS.

43. (new) The isolated nucleic acid of claim 41, wherein said nucleic acid encodes a protein having an amino acid sequence selected from the group consisting of SEQ ID NO:4 and SEQ ID NO:5.

44. (new) The isolated nucleic acid of claim 41, wherein said nucleic acid has a nucleotide sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, and SEQ ID NO:3.

45. (new) The nucleic acid of claim 41, wherein the polypeptide encoded by the nucleic acid comprises an alpha subunit of a homomeric potassium channel.

46. (new) The nucleic acid of claim 41, wherein the polypeptide encoded by the nucleic acid comprises an alpha subunit of a heteromeric potassium channel.

47. (new) An expression vector comprising a nucleic acid of claim 41.

48. (new) A host cell transfected with the vector of claim 47.

**APPENDIX B**  
**PENDING CLAIMS**

41. (new) An isolated nucleic acid encoding a polypeptide comprising an alpha subunit of a KCNQ potassium channel, wherein said polypeptide forms, with at least one additional KCNQ alpha subunit, a KCNQ potassium channel having the characteristic of voltage-gating; and wherein said nucleic acid specifically hybridizes under stringent conditions to a nucleic acid encoding an amino acid sequence of SEQ ID NO:5, wherein the hybridization reaction is incubated at 42°C in a solution comprising 50% formamide, 5x SSC, and 1% SDS and washed at 65°C in a solution comprising 0.2x SSC and 0.1% SDS.

42. (new) The isolated nucleic acid of claim 41, wherein said nucleic acid selectively hybridizes under stringent conditions to a nucleic acid encoding an amino acid sequence of SEQ ID NO:4, wherein the hybridization reaction is incubated at 42°C in a solution comprising 50% formamide, 5x SSC, and 1% SDS and washed at 65°C in a solution comprising 0.2x SSC and 0.1% SDS.

43. (new) The isolated nucleic acid of claim 41, wherein said nucleic acid encodes a protein having an amino acid sequence selected from the group consisting of SEQ ID NO:4 and SEQ ID NO:5.

44. (new) The isolated nucleic acid of claim 41, wherein said nucleic acid has a nucleotide sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, and SEQ ID NO:3.

45. (new) The nucleic acid of claim 41, wherein the polypeptide encoded by the nucleic acid comprises an alpha subunit of a homomeric potassium channel.

46. (new) The nucleic acid of claim 41, wherein the polypeptide encoded by the nucleic acid comprises an alpha subunit of a heteromeric potassium channel.

47. (new) An expression vector comprising a nucleic acid of claim 41.

48. (new) A host cell transfected with the vector of claim 47.